

### ABSTRACT

The present invention provides an optical multiplexer/demultiplexer which can demultiplex a multiplexed optical signal having a number of wavelength bands into respective wavelength regions, or multiplex light having respective wavelength regions in the field of optical communications. That is, light gained by multiplexing light having wavelengths  $\lambda_1$ ,  $\lambda_2$ ,  $\lambda_3$  and  $\lambda_4$  is emitted from an optical fiber (9a) and the optical axis thereof is bent by a micro lens (12a) of a micro lens array (14) so that the light is converted to parallel light which is then reflected from a mirror layer (19) so as to enter into a filter layer (17). A filter (17a) transmits only light having wavelength  $\lambda_1$ , and light having other wavelengths is reflected and again reflected by the mirror layer (19) so as to enter into the filter layer (17). The optical axis of light that has transmitted through the filter (17a) is bent by a micro lens (12c) so that the light is coupled to an optical fiber (9c). Light having wavelength  $\lambda_1$ ,  $\lambda_2$ ,  $\lambda_3$  and  $\lambda_4$  is taken out from the light emitting ends of optical fibers (9c, 9d, 9e and 9f), respectively.